What is claimed is:

1. An isolated nucleic acid molecule selected from the group consisting of:

(a) the DNA sequence of SEQ ID NO:1 or SEQ ID NO:3;

(b) an isolated nucleic acid molecule encoding an amino acid sequence comprising the sequence of SEQ ID NO:2 or SEQ ID NO:4;

(c) an isolated nucleic acid molecule that hybridizes to either strand of a denatured, double-stranded DNA comprising the nucleic acid sequence of (a) or (b) under conditions of moderate stringency in 50% formamide and 6XSSC, at 42°C with washing conditions of 60°C, 0.5XSSC, 0.1% SDS;

(d) an isolated nucleic acid molecule derived by *in vitro* mutagenesis from SEQ ID NO:1 or SEQ ID NO:3;

(e) an isolated nucleic acid molecule degenerate from SEQ ID NO:1 or SEQ ID NO:3 as a result of the genetic code; and

(f) an isolated nucleic acid molecule selected from the group consisting of human IL-1 delta DNA, mouse IL-1 delta DNA, an allelic variant of human IL-1 delta DNA, and a species homolog of IL-1 delta DNA.

2. A recombinant vector that directs the expression of a nucleic acid molecule selected from the group consisting of the nucleic acid molecules of claim 1.

3. An isolated polypeptide encoded by a nucleic acid molecule of claim 1.

4. An isolated polypeptide according to claim 3 having a molecular weight of approximately 17 kD as determined by SDS-PAGE.

5. An isolated polypeptide according to claim 4 in non-glycosylated form.

6. Isolated antibodies that bind to a polypeptide of claim 3.

7. Isolated antibodies according to claim 6, wherein the antibodies are monoclonal antibodies.

8. A host cell transfected or transduced with the vector of claim 3.

9. A method for the production of IL-1 delta polypeptide comprising culturing a host cell of claim 8 under conditions promoting expression, and recovering the polypeptide from the culture medium.

10. The method of claim 9, wherein the host cell is selected from the group consisting of bacterial cells, yeast cells, plant cells, and animal cells.

11. A method for the determination of the molecular weight of a sample protein comprising comparing molecular weight of a sample protein with the molecular weight of a polypeptide of claim 3;

wherein the comparison of molecular weights comprises application of the sample protein and polypeptide to an acrylamide gel, resolution of the sample protein and polypeptide using an electrical current, and application to the gel of a detection reagent, which stains the sample protein and polypeptide.

12. A kit for the determination of the molecular weights of peptide fragments of a sample protein comprising the following:

a vessel;

a polypeptide of claim 3;

at least one enzyme selected from the group consisting of Asparaginylendopeptidase, Arginylendopeptidase, *Achrombobacter* protease I, Trypsin, *Staphlococcus aureus* V8 protease, Endoproteinase Asp-N, and Endoproteinase Lys-C;

a mutated polypeptide from said polypeptide by *in vitro* mutagenesis, wherein a site of enzymatic cleavage by the selected enzyme has been removed; and

fragmented peptides derived from said peptide by enzymatic cleavage with the selected enzyme;

wherein said polypeptide and said sample protein are contacted with the selected protease; and wherein the protein, polypeptides, and fragmented peptides are visualized by application of the protein, polypeptides, and fragmented peptides to an acrylamide gel, resolution

of the protein, polypeptides, and fragmented peptides using an electrical current, and application to the gel of a detection reagent, which stains the protein, polypeptides, and fragmented peptides.